

Calculation of the Energy Levels of the <sup>85861</sup>  
Nuclei Tl<sup>206</sup> and Bi<sup>210</sup> S/048/59/023/012/009/009  
B006/B060

To determine the pair interaction constants of dissimilar nucleons in-  
complete data are available; the author suggests a number of experimen-  
tal investigations to yield missing data required for theory. The au-  
thor thanks L. A. Sliv for supervision of the investigation, and  
G. V. Podgayskaya for assisting in the calculations. There are  
4 tables and 4 references: 2 Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk SSSR  
(Physicotechnical Institute of the Academy of  
Sciences USSR)

Card 4/4

SLIV, L.A.; KHARITONOV, Yu.I.

Calculation of the energy levels of  $Tl^{206}$  and  $Bi^{210}$  nuclei.  
Zhur.eksp.i teor.fiz. 37 no.4:1151-1153 0 '59.  
(MIRA 13:5)

1. Leningradskiy fiziko-tekhnicheskii institut Akademii  
nauk SSSR.

(Thallium--Isotopes) (Bismuth---Isotopes)

BAYMAN, B.F.; KHARITONOV, Yu.I.[translator]; DOLGINOV, A.Z., red.

[Lectures on the application of the theory of groups to  
nuclear spectroscopy] Lektsii po primeneniiu teorii grupp v  
iadernoii spektroskopii. Moskva, Gos.izd-vo fiz.mat.lit-ry,  
1961. 226 p. Translated from the English. (MIRA 16:1)  
(Groups, Theory of) (Spectrum, Atomic)

BAND, I.M.; SLIV, L.A.; KHARITONOV, Yu.I.

Correlation of the motion of four nucleons in a  $\text{Po}^{212}$  nucleus  
Zhur.eksp.i teor.fiz. 41 no.4:1274-1284 0 '61. (MIRA 14:10)

1. Leningradskiy fiziko-tekhnicheskii institut AN SSSR.  
(Quantum theory) (Polonium)

15376

S/056/63/044/001/043/067  
B102/B186

AUTHORS: Sliv, L. A., Kharitonov, Yu. I.

TITLE: The level with the spin  $I=16$  in the  $Po^{212}$  nucleus

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44, no. 1, 1963, 247 - 248

TEXT: The 2.93-Mev level of  $Po^{212}$  with  $I \geq 16$  and  $\tau \approx 45$  sec (cf. e. g. Perlman et al. Phys. Rev. 127, 917, 1962) is investigated. The authors use parameters and formulas derived previously (ZhETF, 41, 1274, 1961) for calculating the diagonal matrix elements of nn, pp, and np interactions for  $0 \leq J \leq 8$  and  $0 \leq I \leq 16$ . This is done for the 44+44 levels of the configurations  $|j_n^2 8, j_p^2 J, I\rangle$  and  $|j_n^2 J, j_p^2 8, I\rangle$  to which  $\gamma$ -transitions may take place from the  $|j_n^2 8, j_p^2 8, 16\rangle$  level. The calculations show that among these 88 levels there are only two that lie below the level with  $I = 16$ , namely  $|j_n^2 8, j_p^2 0, 8\rangle$  and  $|j_n^2 0, j_p^2 8, 8\rangle$ .  $\gamma$ -transitions to these levels are possible with  $l=8$  and  $\tau_\gamma \gg 45$  sec (not observable); it is therefore probable that the

Card 1/2

The level with the spin...

S/056/63/044/001/043/067  
B102/B186

level with  $I=16$  decays only via  $\alpha$ -transitions. Due to position, binding energy and multipole order of levels with  $I \geq 16$  it is concluded that  $I=16$  is the only possibility for the  $Po^{212}$  level investigated. There are 2 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physicotechnical Institute imeni A. F. Ioffe of the Academy of Sciences USSR)

SUBMITTED: July 17, 1962

SLIV, L. A.; KHARITONOV, Yu. I.

"High-Lying Nuclear Isomeric States."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22  
Feb 64.

FTI (Physico Technical Inst)

ACCESSION NR: AP4024058

B/0048/64/028/002/0315/0324

AUTHOR: Kharitonov, Yu.I.

TITLE: Neutron-proton interaction and the levels in odd-odd nuclei [Report, Fourteenth Annual Conference on Nuclear Spectroscopy held in Tbilisi 14-22 Feb 1964]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.2, 1964, 315-324

TOPIC TAGS: neutron proton interaction, nucleon interaction, heavy odd-odd nucleus, Nordheim's rules, Brennan-Bernstein rules, residual interaction, configuration splitting, level assignment, level spectrum, bismuth 210, bismuth 212, bismuth 214

ABSTRACT: Most of the properties of the ground and low-lying states of even-even and odd-A nuclei can now be satisfactorily explained or interpreted with the aid of different nuclear models. An outstanding exception to this is determination of the spins of low-lying levels in odd-odd nuclei. Thus, in 1951 L.W.Nordheim (Revs.Mod.Phys.23,322,1951) on the basis of the single-particle model formulated empirical rules predicting the spins of the ground states of odd-odd nuclei, but with accumulation of additional experimental data the number of exceptions to these rules increased greatly. In 1960, M.H.Brennan and A.M.Bernstein (Phys.Rev.120,927,1960) on

Card 1/3

ACCESSION NR: AP4024058

the basis of analysis of the spines of the ground states of nuclei with mass numbers from 20 to 120 replaced Nordheim's rules with "corrected" rules, but these new rules also have a number of exceptions, and, apparently, cannot be applied in the region of heavy elements, for the residual interaction between nucleons can, in general, depend on the total number of particles in the nucleus. Moreover, there are no suitable rules for predicting the spins of low-lying excited states. Accordingly, the purpose of the present work was to establish the character of the sequence of low-lying levels in heavy odd-odd nuclei on the basis of general considerations regarding the forces acting between neutrons and protons in the nucleus. The approach is based on consideration of the residual interaction of all the outer nucleons, moving in the central self-consistent field, and of the interaction of these nucleons with the nuclear core. Although in most calculations account is taken of both the diagonal and off-diagonal matrix elements of the interaction operators, evaluations show that consideration of only the diagonal splitting of the configurations is sufficient to bring out the distinctive characteristics of the spectrum of low-lying levels. The author considers configuration splitting under the influence of residual n-p interaction; this pairing interaction is characterized by two parameters  $v_0$  and  $v_1$ , the values of which are calculated for heavy nuclei. Specific calculations are

Card 2/3



ACCESSION NR: AP4024058

carried out for  $\text{Bi}^{210}$  and the results of the calculations are compared with the experimental level spectrum. The agreement for many levels is good. Further there are considered the level spectra of heavy odd-odd nuclei in the diagonal approximation and some tentative evaluations are made for  $\text{Bi}^{212}$  and  $\text{Bi}^{214}$ . It is concluded that the many exceptions to the empirical rules of Nordheim, and Brennan and Bernstein can be explained by the fact that in many cases pairing correlations and interaction between the outer nucleons and the nuclear core are significant. Hence at present it is pointless to seek a simple rule capable of predicting the spins of the ground and low-lying states of any odd-odd nucleus solely on the basis of the Nordheim number for the ground state configuration. "The author desires to express his deep gratitude to L.A.Sliv under whose guidance the work was carried out." Orig.art. has: 10 formulas, 5 figures and 3 tables.

ASSOCIATION: Fiziko-tehnicheskii institut im.A.I.F.Ioffe Akademii nauk SSSR (Physico-technical Institute, Academy of Sciences, SSSR)

SUBMITTED: 10Oct63

DATE ACQ: 08Apr64

ENCL: 00

SUB CODE: NS

NR REF SOV: 005

OTHER: 003

Card 3/3

ACCESSION NR: AP4019253

8/0056/64/046/002/0811/0813

AUTHOR: Sliv, L. A.; Kharitonov, Yu. I.

TITLE: Residual np interaction in heavy nuclei and high isomer states

SOURCE: Zhurnal eksper. i teor. fiz., v. 46, no. 2, 1964, 811-813

TOPIC TAGS: np interaction, heavy nucleus, isomer state, high lying isomer state, transuranium element

ABSTRACT: In view of the large number of nuclear phenomena in which a vital part is played by residual np interaction between the nucleons of the overfilled neutron and proton shells, and analysis is made of the matrix elements of the np forces in such interactions, for various neutron and proton configurations. It is found that isomeric levels caused by np forces can be both low and high lying with respect to the ground state, and that high lying isomeric states

Card 1/3

ACCESSION NR: AP4019253

must occur fairly frequently. Isomerism in the transuranium element region is also examined. Special interest attaches to observation of isomeric levels in nuclei with short-lived ground states, since the determination of their lifetimes and the establishment of such levels adds information on the character of np interactions in nuclei. Orig. art. has: 1 figure and 1 table..

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR  
(Physicotechnical Institute AN SSSR)

SUBMITTED: 11Jul63

DATE ACQ: 27Mar64

ENCL: 01

SUB CODE: PH

NO REF SOV: 003

OTHER: 000

Card 2/2

SLIV, L.A.; KHARITONOV, Yu.I.

Isospin in heavy nuclei. IAd. fiz. 1 no.6:1129-1131 Je '65.  
(MIRA 18:6)

1. Fiziko-tekhnicheskiy institut imeni Ioffe AN SSSR.

PEKER, L.K.; KHARITONOV, Yu.I.

Three-particle isomeric states with a small spin. Izv. AN SSSR.  
Ser.fiz. 30 no.1:144-147 Ja '66.

(MIRA 19:1)

1. Fiziko-tehnicheskii institut im. A.F.Ioffe AN SSSR i  
Leningradskiy gosudarstvennyy universitet.

L 27606-66 EWT(m)

ACC NR: AF6018485

SOURCE CODE: UR/0367/65/001/006/1129/1131

AUTHOR: Sliv, L. A.; Kharitonov, Yu. I.

ORG: Physico-Technical Institute im. A. F. Ioffe, AN SSSR (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Isospin in heavy nuclei

SOURCE: Yadernaya fizika, v. 1, no. 6, 1965, 1129-1131

TOPIC TAGS: heavy nucleus, Coulomb interaction, quantum number, nuclear spin, light nucleus, cadmium, nucleon, nuclear resonance

ABSTRACT: Whether or not it is possible to ascribe definite values of the isospin  $T$  to states of heavy nuclei has become of current importance in connection with the observation of analog states. Reasons have been given that the isospin  $T$  may be a good quantum number for large values of the nuclear charge  $Z$ . But it is of interest to find the fraction of the mixture of states with other  $T$  in the lowest value of the isospin  $T_0$  for the ground state, using the most realistic model of the nucleus and accurate approximations for the effect of Coulomb interaction.

The paper gives a formula for the Coulomb potential of a particle in a field of  $Z$  particles. The Coulomb part of the potential results in an admixture of states with other  $T$ ; or, more exactly, only the variable part of the Coulomb potential mixes states with different  $T$ . Accordingly, in the potential for the

Card 1/3

L 27606-66

ACC NR: AP6018485

0

perturbation in  $T$  it is necessary to include only the term proportional to  $r_1^2$ . The resulting potential gives single-particle transitions to states with the same spins  $j$  and the same parity but with different radical quantum numbers  $n$ , in which the isospin  $T$  of the nucleus may change by unity. A formula is given for the fraction  $P$  of admixture of states with other  $T$ . The dependence of the fraction  $P$  on  $Z$  is expressed principally in the sum of  $n$  terms in the formula for  $P$ , in which  $n$  increases with  $Z$ .

For light nuclei up to  $Z=20$  ( $\text{Ca}^{40}$ ), for which  $T_0 = 0$ , the admixture fraction  $P$  increases with  $Z$ . The admixture of other  $T$  would increase approximately linearly if the isospin  $T_0$  remained equal to zero. Then, for nuclei heavier than  $\text{Ca}^{40}$ , use of the isospin as a quantum number would cease to have meaning. But for stable nuclei after  $\text{Ca}^{40}$  (actually the  $\text{Ca}^{40}$  nucleus does not lie on the stability curve) the isospin  $T_0$  is greater than zero and increases with increase in  $A$ . In other words, the admixture fraction  $P$  remains approximately the same for all stable nuclei: i.e., 1-2%. This result may also be extended to all the low excited states of the nuclei.

The purity of the isospin  $T$  in heavy nuclei may be verified experimentally from the familiar selection rules. Thus, the Fermi  $\beta$ -transition  $0^+ \rightarrow 0^+$  which is permitted in the ordinary spin will be forbidden in the isospin. Nuclear charge exchange reactions  $A(p,n)B$ , which go through resonance states of the compound nucleus, will be forbidden in  $T$ .

The ground state corresponds to a potential well with the minimum value  $T_0 = \frac{1}{2}(N - Z)$ . Excited states of the well correspond to higher values

Card 2/3

L 27606-66

ACC NR: AP6018485

2  
of the isospin T. The nucleon states in the excited well are said to be analog states and are easily observed experimentally. The authors thank M. Ya. Amis'ya and B. L. Birbrair for their helpful discussions. Orig. art. has: 1 figure and 8 formulas. [JPRS]

SUB CODE: 20 / SUBM DATE: 26Feb65 / ORIG REF: 001 / OTH REF: 002

Card 3/3 CC



L 07154-67 EWT(m)/EWP(t)/ETI IJP(c) JD  
ACC NR: AP7001029

SOURCE CODE: UR/0048/66/030/001/0144/0147

AUTHOR: Peker, L. K. and Kharitonov, Yu. I.

ORG: Peker Leningrad State University (Leningradskiy gosudarstvennyy universitet);  
Kharitonov Physicotechnical institute im. A. F. Ioffe AN SSSR (Fiziko-tekhnicheskii  
institut AN SSSR)

TITLE: Three-particle isomeric states with small spin<sup>19</sup> [Paper presented at the 2nd  
All-Union Symposium on the Physics of Thin Ferromagnetic Films; Irkutsk, 10-15 July  
1964]

Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya (Bulletin of the Academy  
of Sciences USSR: Physics Series), Vol 30, No 1, Jan 1966, pp 144-147

Abstract: Silvola et al. (J. Nucl. Phys., Vol 52, p. 449 1964) showed the  
existence of a long-lived alpha-radioactive isomeric state in  $^{83}\text{Bi}^{198}$   
with small spin. Due to the similarity in decay characteristics of  $\text{Bi}^{201}$   
to  $\text{Bi}^{195-203}$  one may suppose that the latter also have small spin. Experi-  
mentally it was observed that the ground states of  $\text{Bi}^{199-209}$  are  $9/2$ , and  
no spin of  $1/2$  exists for the lowest single-particle proton levels. Con-  
sequently, the observed isomeric levels with spin  $1/2$  must be from multiple-  
particle states. The energy of the level indicates that not more than 3  
particles are involved, and it is improbable that all are nucleons and/or  
protons. Considerations involved in the problem are discussed in detail.  
The authors thank L. A. Sliv for useful discussions. Orig. art. has: 4 figures, 2  
formulas and 1 table. [JPRS: 35,435]  
Card 1/2

0924 0031

L 07154-67

ACC NR: AP7001029

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000721820007

TOPIC TAGS: bismuth, radioactive decay, isomer, alpha radiation

SUB CODE: 18 / SUHM DATE: none / ORIG REF: 004 / OTH REF: 003

SHILIN, A.N., kand.tekhn.nauk; KHARITONOV, Yu.M., gornyy inzhener

Means of development of the Gay deposit. Gor.Zhur. no.5:19-22  
My '60. (MIRA 14:3)

1. Unipromed', Sverdlovsk.  
(Orenburg Province—Strip mining)

ACC NR: AP6034244

(N)

SOURCE CODE: UR/0120/66/000/005/0227/0228

AUTHOR: Kharitonov, Yu. N.

ORG: Kalinin State Pedagogical Institute (Kalininskiy gosudarstvennyy pedagogicheskiy institut)

TITLE: Pulse integration over length distribution

SOURCE: Pribery i tekhnika eksperimenta, no. 5, 1966, 227-228

TOPIC TAGS: pulse integrator, pulse shaper, pulse analyzer

ABSTRACT: A pulse width discriminator which can be set to pass only pulses having a shorter duration than a desired value is described. The circuit is used to obtain an integral distribution of the magnetic moments of Barkhausen jumps in relation to their duration. This vacuum tube circuit has a cathode follower as the input stage. An RC integrating circuit is used to integrate the pulse. The output of the cathode follower also drives a version of Schmitt trigger which, in turn, provides pulses of fixed amplitude and durations equal to the durations of the input pulses. The Schmitt trigger output initially drives a switching tube across the capacitor of the integrating circuit into cut-off. This tube is normally fully conducting. At the end of the input pulse, the tube is turned on again and thus discharges the integrating capacitor. The integrated output pulses appear across the cathode resistor of the switching tube.

UDC: 681.142.334

Card 1/2

ACC NR: AP6034244 \*

A second circuit is used for pulse width discrimination. This circuit consists of a second switching tube, also connected across the integrating capacitor, that is initially turned off, then turned on to discharge the capacitor after a predetermined time interval. A sawtooth generator is utilized to generate ramp signal for timing purposes. The start of each ramp is synchronized with the leading edge of the input pulse; it turns on a trigger tube when it reaches a preset amplitude value. The trigger signal is shaped and used to turn on the second switching tube, and thus to discharge the integrating capacitor prior to the termination of the input pulse. The circuit is suitable for use with pulses of 0.05 to 10 microseconds duration. The author expresses his gratitude to V. M. Rudyak for his valuable advice during the execution of this work and the discussion of the results. Orig. art. has: 2 figures.

SUB CODE: 09/      SUBM DATE: 28Sep65/      ORIG REF: 002

Card 2/2

ACC NR: AP7001965

SOURCE CODE: UR/0120/66/000/006/0206/0206

AUTHOR: Kharitonov, Yu. N.

ORG: Kalinin State Pedagogical Institute (Kalininskiy gosudarstvennyy pedagogicheskiy institut)

TITLE: Sensitive indicator of magnetic-field variation based on the Barkhausen effect

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1966, 206

TOPIC TAGS: magnetic field measurement, magnetic field strength *intensity*

ABSTRACT: A ferromagnetic specimen placed inside a solenoid (see Fig. 1) is magnetized to saturation, and then the field is gradually reduced to a value at which the Barkhausen

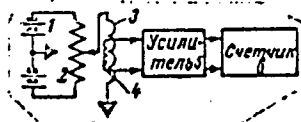


Fig. 1. Weak-magnetic-field detector

- 1 - battery; 2 - potentiometer; 3 - magnetizing coil;  
4 - solenoid with specimen; 5 - amplifier; 6 - scaler.

jumps occur most clearly. At this point, the instrument is capable of detecting an external magnetic field as low as  $10^{-5}$  oe oriented along the axis of the solenoid or a small change in the original magnetic field. An opposing external field can be also detected by providing a second set of magnetizing coil and solenoid. Orig. art. has: 1 figure.

SUB CODE: 09, 20/ SUBM DATE: 21Jan66/ ORIG REF: 002/ OTH REF: 001/ ATD PRESS: 5110 [03]

Card 1/1

UDC: 621.317.445

KHARITONOV, Yu.N.

X-ray diagnosis of chronic pyelonephritis. Trudy Kish. gos. med.  
inst. 24:171-179 '64 (MIRA 18:1)

1. Urologicheskaya klinika (zav. - chlen-korrespondent AMN SSSR  
prof. A. Ya. Pytel') 2-go Moskovskogo meditsinskogo instituta  
imeni N.I. Pirogova).

LUVISHIS, L. A., starshiy nauchnyy sotrudnik; KOVALEVA, N. S., starshiy  
nauchnyy sotrudnik; KALININ, I. A., starshiy nauchnyy sotrudnik;  
KHARITONOV, Yu. P., mladshiy nauchnyy sotrudnik

Laboratory fire-testing method of fabrics. Tekst. prom. 21  
no.10:76-78 0 '61. (MIRA 14:10)

1. TSentral'nyy nauchno-issledovatel'skiy institut sherstyanoy  
promyshlennosti.

(Clothing, Protective)

(Fire-testing)

ANTUF'YEV, V.V. [deceased]; VASIL'YEV, Ya.V.; VOTINOV, M.P.; KHARITONOVA, O.K.;  
KHARITONOV, Ye.V.

Electron paramagnetic resonance in the system titanium-oxygen.  
Fiz. tver. tela 4 no.6:1496-1499 Je '62. (MIRA 16:5)  
(Paramagnetic resonance and relaxation) (Titanium oxides)



S/078/60/005/06/03/030  
B004/B014

5.2620

AUTHORS: Babayeva, A. V., Kharitonov, Yu. Ya.

TITLE: Infrared Absorption Spectra of Polycrystals of Nitrohalides of Bivalent Platinum in the Range of the NaCl Prism

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 6, pp. 1196 - 1207

TEXT: By way of introduction, the authors offer a detailed survey of research work concerning the infrared spectra of the complex compounds of  $\text{Co}^{\text{III}}$ ,  $\text{Ni}^{\text{II}}$ ,  $\text{Pt}^{\text{II}}$ , and  $\text{Pd}^{\text{II}}$  (Refs. 1-14). Here, they investigated the infrared spectra of complex compounds of the type  $\text{K}_2[\text{PtX}_n(\text{NO}_2)_{4-n}]$ , where  $\text{X} = \text{Cl}, \text{Br}, \text{I}$ ,  $n = 0, 1, 2, 3$ . Since there occurred no absorption bands (due to vibrations of heavy  $\text{Cl}$ -,  $\text{Br}$ -, and  $\text{I}$ -atoms) in the infrared region investigated, and since moreover no considerable interactions were to be expected between  $\text{X}$  and  $\text{NO}_2$ , the authors assumed that the infrared spectra of platinum nitrohalides in the region  $2 - 15 \mu$  would represent the

Card 1/4

Infrared Absorption Spectra of Polycrystals of Nitrohalides of Bivalent Platinum in the Range of the NaCl Prism

S/078/60/005/C6/03/030  
B004/B014

spectrum of the coordinated  $\text{NO}_2$  group. They investigated the compounds  $\text{K}_2[\text{PtCl}_3\text{NO}_2]$  (I),  $\text{cis-K}_2[\text{PtCl}_2(\text{NO}_2)_2]$  (II),  $\text{K}_2[\text{PtCl}(\text{NO}_2)_3]$  (III),  $\text{cis- and trans-K}_2[\text{PtBr}_2(\text{NO}_2)_2]$  (IV and V),  $\text{trans-K}_2[\text{PtI}_2(\text{NO}_2)_2]$  (VI),  $\text{K}_2[\text{Pt}(\text{NO}_2)_4]$  (VII), and the palladium compound  $\text{K}_2[\text{Pd}(\text{NO}_2)_4]$  (VIII). The compounds were produced by the methods described in publications (Refs. 22-28, among them papers by I. I. Chernyayev, A. A. Grinberg, and G. A. Shagisultanova). The crystalline samples were suspended in paraffin oil, and the spectrum was taken by means of the MKC-11 (IKS-11) infrared spectrometer with NaCl prism. Table 1 lists experimental results. The authors compare their results with those obtained by K. Nakamoto, J. Fujita, and H. Murata (Ref. 13), and discuss the position of the fundamental vibrations of the  $\text{NO}_2$  group. The absorption bands of the internal deformation vibrations  $\delta(\text{NO}_2)$  (Fig. 1) are in the region  $820 - 850 \text{ cm}^{-1}$ , those of the symmetric stretching vibrations  $\nu_s(\text{NO})$  are in the region  $1315 - 1350 \text{ cm}^{-1}$ , and those of the antisymmetric stretching vibrations

Card 2/4

Infrared Absorption Spectra of Polycrystals of Nitrohalides of Bivalent Platinum in the Range of the NaCl Prism S/078/60/005/06/03/030 B004/B014

$\nu_{as}(\text{NO})$  are in the region  $1360 - 1440 \text{ cm}^{-1}$ . The other frequencies found in the spectra are indicated as follows: the wagging oscillations  $\rho(-\text{NO}_2)$  in the region  $640 - 650 \text{ cm}^{-1}$  (Fig. 2) in accordance with Ref. 13; furthermore, the two combination frequencies (not observed as yet) in the region  $1100 - 1200 \text{ cm}^{-1}$  (Fig. 3), which are defined as harmonic vibrations  $2\rho(-\text{NO}_2)$ . In the region  $2570 - 2710 \text{ cm}^{-1}$  a doublet band (Fig. 4) defined as  $2\nu_g(\text{NO})$ , and in the region  $2680 - 2710 \text{ cm}^{-1}$  a band defined as  $2\nu_{as}(\text{NO})$ . These definitions are confirmed by a comparison with the spectra of  $\text{Co}^{\text{III}}$ ,  $\text{Pd}^{\text{II}}$ , and  $\text{Ni}^{\text{II}}$  nitrocomplexes (Table 2). The influence of the structure factor upon the infrared spectrum is shown in Table 3. A change in the state of the  $\text{NO}_2$  group in the sequence  $\text{NO}_2, \text{Cl} \rightarrow \text{Br}$  proceeds from the spectra of  $\text{cis-K}_2[\text{PtX}_2(\text{NO}_2)_2]$  ( $\text{X} = \text{NO}_2, \text{Cl}, \text{Br}$ ). A change in the state of the  $\text{NO}_2$  group in the sequence  $\text{NO}_2 \rightarrow \text{Br} \rightarrow \text{I}$  proceeds from the

Card 3/4

Infrared Absorption Spectra of Polycrystals of S/078/60/005/06/03/030  
Nitrohalides of Bivalent Platinum in the Range B004/B014  
of the NaCl Prism

spectra of  $\text{trans-K}_2[\text{PtY}_2(\text{NO}_2)_2]$  ( $\text{Y} = \text{NO}_2, \text{Br}, \text{I}$ ). In the case of nitro-  
chlorides  $\text{K}_2[\text{Pt}(\text{NO}_2)_n\text{Cl}_{4-n}]$ ,  $n = 1$  to 4, the frequency of the nitro group  
in the region  $650 - 650 \text{ cm}^{-1}$  is chiefly dependent on the ligand Z  
( $\text{Z} = \text{Cl}, \text{NO}_2$ ) in the direction of the coordinate  $\text{Z} - \text{Pt} - \text{NO}_2$ . There are  
4 figures, 3 tables, and 28 references: 5 Soviet, 5 American, 10 British,  
1 Swedish, 4 German, and 3 French.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im.  
N. S. Kurnakova Akademii nauk SSSR (Institute of General  
and Inorganic Chemistry imeni N. S. Kurnakov of the  
Academy of Sciences, USSR)

SUBMITTED: September 1, 1959

Card 4/4

BABAYEVA, A.V.; KHARITONOV, Yu.Ya.; NOVOZHENYUK, Z.M.

Infrared absorption spectra of complex compounds of iridium (III)  
with an inner-sphere sulfito group. Zhur.neorg.khim. 6 no.10:  
2263-2280 0 '61. (MIRA 14:9)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova  
Akademii nauk SSSR.

(Iridium compounds--Spectra)

BABAYEVA, A.V.; KHARITONOV, Yu.Ya.; NOVOZHENYUK, Z.M.

Infrared absorption spectra of complex compounds of platinum (II)  
with an inner-sphere sulfite group. Zhur.neorg.khim. 6 no.10:  
2281-2287 0 '61. (MIRA 14:9)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova  
Akademii nauk SSSR.

(Platinum compounds--Spectra)

KHARITONOV, Yu.Ya.

Infrared absorption spectra of  $(\text{NH}_4)_2\text{SO}_3$ . Zhur.neorg.khim. 6  
no.11:2601-2602 '61. (MIRA 14:10)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova  
AN SSSR.

(Ammonium sulfite-Spectra)

KORYAZHKIN, V.A.; TATEVSKIY, V.M.; KHARITONOV, Yu.Ya.

Ultraviolet absorption spectra of lithium fluoride and lithium  
bromide vapors. Vest. Mosk. un. Ser. 2: Khim. 16 no.1:48-50 Ja-F  
'61. (MIRA 14:4)

1. Laboratoriya molekulyarnoy spektroskopii Moskovskogo universiteta.  
(Lithium fluoride—Spectra) (Lithium bromide—Spectra)



SLIV, L.A.; SOGOMONOVA, G.A.; KHARITONOV, Yu.I.

Pairing forces and pair correlations in  $Tl^{206}$  and  $Bi^{210}$  nuclei.  
Zhur.eksp.i teor.fiz. 40 no.3:946-953 Mr '61. (MIRA 14:8)

1. Leningradskiy fiziko-tekhnicheskii institut Akademii nauk SSSR.  
(Nuclei, Atomic) (Thallium--Isotopes) (Bismuth--Isotopes)

KHARITONOV, Yu.Ya.; NI TSZYA-TSZAN' [Ni Chia-tsan]; BABAYEVA, A.V.

Structure of "anomalous" aminonitrile complex compounds of  
bivalent platinum. Dokl. AN SSSR 141 no.3:645-648 N '61.  
(MIRA 14:11)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova  
AN SSSR. Predstavleno akademikom I.I. Chernyayevym.  
(Platinum compounds)  
(Amines)

35589

S/062/62/000/003/004/014

B110/B101

11.2130

5.2420

AUTHORS: Kharitonov, Yu. Ya., and Buslayev, Yu. A.

TITLE: Infrared absorption spectra of oxofluorides of some metals of the fourth and fifth group of the periodic system

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 3, 1962, 393-401

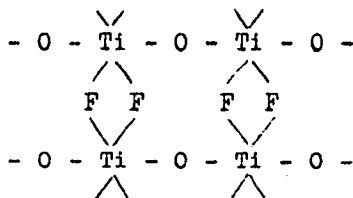
TEXT: The character of the metal-oxygen bonds in solid oxo-fluorides of titanium, zirconium, hafnium and vanadium was investigated on the following compounds:  $\text{TiOF}_2 \cdot \text{H}_2\text{O}$ ,  $\text{VOF}_2 \cdot \text{H}_2\text{O}$ ,  $\text{KNbOF}_5 \cdot \text{H}_2\text{O}$ ,  $\text{ZrO}_2$ ,  $\text{Zr}_4\text{F}_{10}(\text{OH})_6 \cdot 3\text{H}_2\text{O}$ ,  $\text{Zr}_4\text{F}_{10}(\text{OH})_6 \cdot \text{H}_2\text{O}$ ,  $\text{Zr}_4\text{F}_{10}\text{O}_3$ ,  $\text{ZrF}_4 \cdot 3\text{H}_2\text{O}$ ,  $\text{ZrF}_4 \cdot \text{H}_2\text{O}$ ,  $\text{Zr}_4\text{F}_{14}\text{O}$ ,  $\text{ZrOF}_2$ ,  $\text{KZrOF}_2 \cdot 2\text{H}_2\text{O}$ ,  $\text{Hf}_4\text{F}_{12}\text{O}_2$ ,  $\text{HfF}_4 \cdot \text{H}_2\text{O}$ ,  $\text{Hf}_4\text{F}_{12}\text{O}_2$ ,  $\text{HfF}_4 \cdot \text{H}_2\text{O}$ ,  $\text{HfF}_{14}\text{O}$ ,  $\text{HfOF}_2$ .  $\text{K}_2\text{NbOF}_5$  was obtained by dissolving Nb metal in the aqueous mixture of HF and  $\text{H}_2\text{O}_2$  and precipitation by KF addition. The infrared absorption spectra were obtained between  $650\text{-}2000\text{ cm}^{-1}$ . The wide band at

Card (1/5)

Infrared absorption spectra of...

S/062/62/000/003/004/014  
B110/B101

$\sim 750-950 \text{ cm}^{-1}$  of  $\text{TiOF}_2 \cdot \text{H}_2\text{O}$  was characteristic of the bond  $\text{Ti-O-Ti-O-Ti-}$ , and was also present in  $\text{TiOSO}_4 \cdot \text{H}_2\text{O}$ . As a wide band is maintained for anhydrous  $\text{TiOF}_2$  between  $\sim 750-950 \text{ cm}^{-1}$ , the following structure can be assumed.



Since the frequency of the stretching vibrations is  $< 950 \text{ cm}^{-1}$ , the Ti-O bond is a double one. A TiO bond is also proved by the small TiO distance ( $1.78 \text{ \AA}$ ) in the crystal lattice of  $[\text{TiCl}_2(\text{C}_2\text{H}_5)]_2\text{O}$ , which corresponds to the TiO distance ( $1.80 \text{ \AA}$ ) in the crystal lattice of  $\text{TiOSO}_4 \cdot \text{H}_2\text{O}$ . For  $\text{VOF}_2 \cdot 2\text{H}_2\text{O}$ , two effects, corresponding to the loss of the two water

Card 2/5

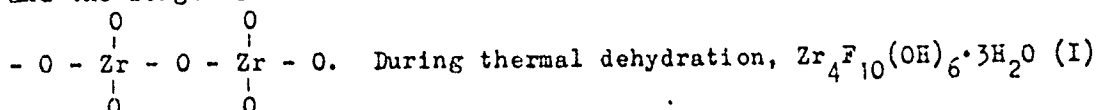
APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000721820007

Infrared absorption spectra of...

S/062/62/000/003/004/014  
B110/B101

molecules, exist in the thermograph. An intensive narrow band ( $1001 \text{ cm}^{-1}$ ) proves the stretching vibrations of the V=O bond. As the force constant of the VO band is  $7.2 \text{ mdyne/\AA}$ , a multiple bond exists. The frequencies at  $459$  and  $517 \text{ cm}^{-1}$  correspond to VF bonds, those of  $\sim 3163$ ,  $3331$  and  $3500 \text{ cm}^{-1}$  to the stretching vibrations in the water molecules. The  $\text{NbOF}_5^{2-}$  ion contained in the crystal lattice of  $\text{K}_2\text{NbOF}_5 \cdot \text{H}_2\text{O}$  is presumably of octahedral structure, with the Nb atom in the center. An intensive narrow absorption band at  $928 \text{ cm}^{-1}$  corresponds to the NbO-bond, the intensive band at  $1630 \text{ cm}^{-1}$  to the  $\delta(\text{H}_2\text{O})$ . A multiple ( $\geq 2$ ) bond in the NbO is also proved by the force constant of  $6.9 \text{ mdyne/\AA}$ . Since in the monoclinic zirconium dioxide each Zr-atom is surrounded by seven O-atoms and the length of the ZrO bond is  $2.04-2.26 \text{ \AA}$ , no double bond exists, but



Card 3/5

Infrared absorption spectra of...

S/062/62/000/003/004/014  
B110/B101

loses two  $H_2O$  molecules  $\rightarrow Zr_4F_{10}(OH)_6 \cdot H_2O$  (II), which again loses water  $\rightarrow Zr_4F_{10}O_3$  (III). Tetramers are presumed, and no  $ZrO$  double bonds in I. In II ( $\sim 875-975\text{ cm}^{-1}$ ) and III ( $\sim 877\text{ cm}^{-1}$ ),  $Zr=O$  double bond presumably exists. The force constants of  $Zr=O$  in III are  $6.2\text{ mdyne/\AA}$ . When heating  $ZrF_4 \cdot 3H_2O$  (IV), water is separated and  $ZrF_4 \cdot H_2O$  (V) and then  $Zr_4F_{14}O$  (VI) are formed. In air  $ZrF_{14}O$  hydrolyzes to  $Zr_4OF_2$  (VII). Dehydration of  $HZrF_5 \cdot 4H_2O$  produces  $HZrF_5 \cdot 4H_2O \rightarrow (V) \rightarrow (VI) \rightarrow (VII)$ .

$O_3F_3Zr \begin{array}{c} \diagup F \\ \diagdown F \end{array} ZrF_3O_3$  exists in the crystal lattice of IV. No  $ZrO$  double bond

exists, only for VII ( $864\text{ cm}^{-1}$ ) there exists the zirconyl group. The force constant of the  $ZrO$  bond is here  $6.0\text{ mdyne/\AA}$ .  $KZrOF_3 \cdot 2H_2O$  has the  $ZrO$  double bond (absorption band at  $833\text{ cm}^{-1}$ ), force constant  $5.6\text{ mdyne/\AA}$ . The thermal decomposition of  $[Hf_4F_{12}(OH)_4 \cdot 3H_2O] \cdot 2H_2O$  goes over to  $Hf_4F_{12}O_2$  due

Card 4/5

Infrared absorption spectra of...

S/062/62/000/003/004/014  
B110/B101

to the gradual loss in water. A narrow band at  $889\text{ cm}^{-1}$  corresponds to the stretching vibrations of the  $\text{HfO}$  group, the force constant is  $6.8\text{ mdyne/\AA}$ .  $\text{HfF}_4 \cdot 3\text{H}_2\text{O}$  (VIII) decomposes according to:

$\text{VIII} \rightarrow \text{HfF}_4 \cdot \text{H}_2\text{O}$  (IX)  $\rightarrow \text{Hf}_4\text{F}_{14}\text{O}$  (X)  $\rightarrow \text{HfOF}_2$  (XI). X and XI have absorption maxima at  $896$  and  $894\text{ cm}^{-1}$ . As the force constants are  $6.9\text{ mdyne/\AA}$ , the  $\text{HfO}$  group is maintained during the  $\text{X} \rightarrow \text{XI}$  transition. The stability of the MO bonds in oxofluorides increases:

$\text{Ti}(4+) < \text{Zr}(4+) < \text{Hf}(4+)$ . The increased strength of the MO bond can be explained in terms of the theory of multiple bonds by M. Ye. Dyatkina et al. ((Zh. neorgan. khimii, 6, 575 (1961)). There are 4 figures and 2 tables. The most important reference to English-language publications is: C. G. Barraclough et al. J. Chem. Soc. 1959, 3552.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im.  
N. S. Kurnakova Akademii nauk SSSR (Institute of General  
and Inorganic Chemistry imeni N. S. Kurnakov of the  
Academy of Sciences USSR)

SUBMITTED: October 14, 1961  
Card 5/5

S/062/62/000/003/005/014  
B110/B101

AUTHORS: Kharitonov, Yu. Ya., and Rozanov, I. A.

TITLE: Infrared absorption spectra of zirconium thiocyanate complexes

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 3, 1962, 402-407

TEXT: In order to clarify the structure of zirconium thiocyanate complexes  $M[ZrO(NCS)_3 \cdot H_2O] \cdot H_2O$ , their infrared absorption spectra ( $400-4000 \text{ cm}^{-1}$ ) as well as those of  $(PyH)_2[Zr(NCS)_6] \cdot 2H_2O$  (Py = pyridine) and  $ZrOCl_2 \cdot 8H_2O$  were studied in the solid state. Spectra of  $ZrO(NCS)_2 \cdot MNCS \cdot 2H_2O$  and of the same complex with only one water molecule were obtained for  $M = NH_4, K, Rb, Cs$ , or  $PyH$ . The spectra of these compounds were very similar. The bands at  $1600-1609 \text{ cm}^{-1}$  [ $\delta H_2O$ ] and  $\sim 2700-3600 \text{ cm}^{-1}$  [ $\nu(OH)$ ] correspond to water.

The considerable widening and shift of the  $\nu(OH)$  bands for  $ZrO(NCS)_2 \cdot MNCS \cdot 2H_2O$

Card 1/3

Infrared absorption spectra of...

S/062/62/000/003/005/014  
B110/B101

and  $\text{ZrOCl}_2 \cdot 8\text{H}_2\text{O}$  is caused by hydrogen bonds. Since the  $\delta(\text{H}_2\text{O})$  line does not disappear even after the loss of one  $\text{H}_2\text{O}$  molecule, no hydroxyl-, but a zirconyl group is present. The bands at  $\sim 500$ ,  $831-836$ ,  $2047-2086 \text{ cm}^{-1}$  correspond to the deformation vibrations of the NCS group, the stretching vibrations of the SO- and CN bonds. The stretching vibrations at  $831-836 \text{ cm}^{-1}$  prove the bond of the thiocyanogen group over the nitrogen atom with the Zr, those at  $\sim 2130-2180 \text{ cm}^{-1}$  prove that the thiocyanogen group does not form a bridge. The  $\nu(\text{CN})$  frequency ( $2047-2086 \text{ cm}^{-1}$ ) shows that the CN bond is almost a triple bond. The high frequency of the SC bonds ( $831-836 \text{ cm}^{-1}$ ) proves their high strength. Thus, a compensation between the CN- ( $>2$ ,  $<3$ ) and SC bonds ( $>1$ ) takes place, as in the case of trivalent cobalt. The bands at  $913-927 \text{ cm}^{-1}$  are caused by stretching vibrations of the ZrO bond. Thus,  $\text{ZrO}(\text{NCS})_2 \cdot \text{MNCS} \cdot 2\text{H}_2\text{O}$  contains ZrO and thiocyanogen groups bonded to Zr over the nitrogen atom, as well as hydrogen bonds. The compound  $\text{ZrOCl}_2 \cdot 8\text{H}_2\text{O}$  does not contain zirconyl groups.

Card 2/3



Infrared absorption spectra of...

S/062/62/000/003/005/014 .  
B110/B101

There are 3 figures and 1 table. The most important reference to English-language publications is: G. C. Pimentel, A. L. McClellan, The Hydrogen Bond, San Francisco - London, W. H. Freeman and Co., 1960.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova  
Akademii nauk SSSR (Institute of General and Inorganic  
Chemistry imeni N. S. Kurnakov of the Academy of Sciences  
USSR)

SUBMITTED: October 7, 1961

Card 3/3

MAL'TSEVA, N.N.; KHARITONOV, Yu.Ya.

Infrared absorption spectra of magnesium hydride. Zhur.neorg.khim.  
7 no.4:947-948 Ap '62. (MIRA 15:4)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova  
AN SSSR.

(Magnesium hydrides--Spectra)

KHARITONOV, Yu.Ya.; NI TSZYA-TSZYAN' [Ni Chia-chiang]; BABAYEVA, A.V.

Infrared absorption spectra and structure of "anomalous" ammonium nitrile complex compounds of bivalent platinum. Zhur.neorg.khim. 7 no.5:997-1008 My '62. (MIRA 15:7)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova Akademii nauk SSSR.  
(Platinum compounds--Spectra) (Ammonium cyanide)

BABAYEVA, A.V.; KHARITONOV, Yu.Ya.; BARANOVSKIY, I.B.

Infrared absorption spectra of cobalt (III) complex compounds  
with an inner sphere sulfite group. Zhur.neorg.khim. 7 no.6:  
1247-1257 Je '62. (MIRA 15:6)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova  
AN SSSR.

(Cobalt compounds--Spectra)

BABAYEVA, A.V.; KHARITONOV, Yu.Ya.; SHENDERETSKAYA, Ye.V.

Infrared absorption spectra of rhodium (III) complex compounds with an inner-sphere sulfito group. Zhur.neorg.khim. 7 no.7:1530-1537 J1 '62.  
(MIRA 16:3)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova  
AN SSSR.

(Rhodium compounds—Spectra)

42648

S/062/62/000/011/003/021  
B101/B144

11.1180

AUTHOR: Kharitonov, Yu. Ya.

TITLE: Empirical relations between force constants, lengths and frequencies of the stretching vibrations of nitrogen-oxygen bonds

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 11, 1962, 1953 - 1958

TEXT: The following empirical relations are derived from the data for  $r_{NO}$  ( $\text{\AA}$ ),  $k_{NO}$  (mdyne/ $\text{\AA}$ ),  $\nu_{NO}$  ( $\text{cm}^{-1}$ ), which are given in publications for NO,  $NO^+$ ,  $NO_2$ ,  $N_2O_4$ , HNO,  $N_2O$ ,  $NO_2^+$ , NOCl, NOBr,  $NO_2^-$ ,  $N_2O_2^{2-}$ ,  $NH_2OH$ ,  $CH_3NO_2$ ,  $ClNO_2$ ,  $FNO_2$ ,  $HO-NO_2$ ,  $CCl_3-NO_2$ ,  $K_2[PtCl_3(NO_2)_3]$ :-(1) For  $1.06 \leq r_{NO} \leq 1.22$  and  $9 \leq k_{NO} \leq 25$ :  $r_{NO} = 1.30_9 - 0.01_0 k_{NO}$ ;  $k_{NO} = 1.30_9 - 100r_{NO}$ . (2) For  $1.20 \leq r_{NO} \leq 1.45$  and  $4.3 \leq k_{NO} \leq 11$ :  $r_{NO} = 5.26_7/k_{NO}^2 + 1.15_7$ ;  $k_{NO} = 2.2_9/(r_{NO} - 1.15_7)^{1/2}$ . (3) For  $1.36 \leq r_{NO} \leq 1.48$  and  $4 \leq k_{NO} \leq 5$ :

Card 1/3

Empirical relations between force...

S/062/62/000/011/003/021  
B101/B144

$r_{\text{NO}} = 1.99_7 - 0.12_9 k_{\text{NO}}$ ;  $k_{\text{NO}} = 15.4_8 - 7.7_5 r_{\text{NO}}$ . For nitro groups: (4)  
 $v_{\text{as}}(\text{NO}) = 19630 - 14930 r_{\text{NO}}$ ;  $r_{\text{NO}} = 1.31_5 - 0.67 \cdot 10^{-4} v_{\text{as}}(\text{NO})$ , and (5)  
 $[v_{\text{s}}(\text{NO}) + v_{\text{as}}(\text{NO})]/2 = 11420 - 8290 r_{\text{NO}}$ ;  $r_{\text{NO}} = 1.37_7 - 1.21 \cdot 10^{-4} [v_{\text{s}}(\text{NO}) + v_{\text{as}}(\text{NO})]/2$ . The data published for  $\text{NO}_3^-$  ion were not used because of too marked discrepancies. A vibrating two-mass model consisting of  $\text{NH}_2$  and OH groups was assumed for calculating  $k_{\text{NO}}$  for  $\text{NH}_2\text{OH}$ . The correctness of this assumption was confirmed by the fact that the calculation of  $v$  for  $\text{ND}_2\text{OD}$  from  $v$  for  $\text{NH}_2\text{OH}$  by this two-mass model yielded values that agreed closely with the data given by R. E. Nightingale and F. L. Wagner (J. Chem. Phys., 22, 203 (1954)). The difference between the calculated and the experimental  $r_{\text{NO}}$  data does not exceed  $\pm 0.02 \text{ \AA}$ . There are 2 figures and 2 tables. The most important English-language references are: H. W. Brown, G. C. Pimentel, J. Chem. Phys., 29, 883 (1958); N. B. H. Jonathan, J. Molecular Spectroscopy, 4, 75 (1960).

Card 2/3

Empirical relations between force...

S/062/62/000/011/003/021  
B101/B144

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences USSR)

SUBMITTED: March 24, 1962

Card 3/3



BABAYEVA, A.V.; KHARITONOV, Yu.Ya.

Structure of complex compounds containing bidentate sulfito groups. Dokl.AN SSSR 144 no.3:559-561 My '62. (MIRA 15:5)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova  
AN SSSR. Predstavleno akademikom I.I.Chernyayevym.  
(Complex compounds)

KHARITONOV, YU. YA.

Dissertation defended for the degree of Candidate of Chemical Sciences at the Institute of Physical Chemistry in 1962:

"Infrared Absorption Spectra of Complex Compounds of Group VIII Metals with Nitro- and Sulfite-Groups."

Vest. Akad. Nauk SSSR. No. 4, Moscow, 1963, pages 119-145

KHARITONOV, Yu.Ya.; ROZANOV, I.A.; TANANAYEV, I.V.

Infrared absorption spectra of thiocyanate complexes of hafnium (IV).  
Izv. AN SSSR. Otd.khim. nauk no.4:596-601 Ap '63. (MIRA 16:3)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova AN SSSR.  
(Hafnium compounds--Absorption spectra) (Thiocyanates)

KHARITONOV, Yu.Ya.; NI TSZYA-TSZYAN<sup>1</sup> [Ni Chia-chien]; BABAYEVA, A.V.

Infrared absorption spectra of "anomalous" nitrile compounds  
of bivalent platinum with ethylenediamine and methylamine.  
Zhur.neorg.khim. 8 no.1:34-42 Ja '63. (MIRA 16:5)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnskova  
AN SSSR.

(Platinum compounds---Spectra)  
(Ethylenediamine)

(Nitriles)  
(Ethylamine)

BABAYEVA, A.V.; BARANOVSKIY, I.B.; KHARITONOV, Yu.Ya.

Complex compounds of cobalt (IV) containing a thiesulfato group.  
Zhur.neorg.khim. 8 no.3:604-611 Mr '63. (MIFA 16:4)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova AN  
SSSR.

(Cobalt compounds)

(Thiosulfates)

KHARITONOV, Yu.Ya.; SHUL'GINA, I.M.; TRAGGEYM, Ye.N.; BABAYEVA, A.V.

Method of coordinating NCS-groups in the complex compounds of uranium (IV) and uranyl. Zhur.neorg.khim. 8 no.3:767-768 Mr '63. (MIRA 16:4)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova  
AN SSSR.

(Uranium compounds—Absorption spectra) (Isothiocyanates)

MARKOV, V.P.; KHARITONOV, Yu.Ya.; ALIKHANOVA, Z.M.

Structure of complex compounds of uranyl with anions of tartaric, malic,  
and trihydroxyglutaric acids. Zhur.neorg.khim. 8 no.3:774-775 Mr '63.  
(MIRA 16:4)

1. Institut obshchey in neorganicheskoy khimii imeni N.S.Kurnakova  
AN SSSR.

(Uranyl compounds)

(Acids, Organic)

KHARITONOV, Yu.Ya.; ORLOVSKIY, V.P.; TANANAYEV, I.V.

Infrared absorption spectra of chloride and bromide compounds of  
scandium with ammonia. Zhur.neorg.khim. 8 no.5:1093-1103 My  
'63. (MIRA 16:5)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova  
AN SSSR.

(Scandium compounds--Absorption spectra) (Ammonia)



KHARITONOV, Yu.Ya.; BUSLAYEV, Yu.A.

Determining the force constant of the U - O bond in the  
UO<sub>2</sub><sup>2+</sup> ion. Opt. i spektr. 14 no.4:586-587 Ap '63.  
(MIRA 16:6)  
(Uranium oxide's) (Chemical bonds)

BABAYEVA, A.V.; KHARITONOV, Yu.Ya.

Concerning Schutte's note. Zhur.neorg.khim. 9 no.1:236-237 Ja '64.  
(MIRA 17:2)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnatova AN SSSR.

KHARITONOV, Yu. Ya.; MOIGDIN, A. K.; BABAYEVA, A. V.

Infrared absorption spectra of thorium (IV) complexes with  
thiocyanate groups. Izv AN SSSR Ser Khim no. 4:618-622 Ap '64.  
(MIRA 17:5)

1. Institut obshchey i neorganicheskoy khimii im. N. S.  
Kurnakova AN SSSR.

KHARITONOV, Yu.Ya.; BUSLAYEV, Yu.A.

Infrared absorption spectra of oxofluorides of some metals.  
Izv. AN SSSR Ser. Khim. no. 5:803-811, 1964. (MIRA 17-5)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova  
AN SSSR.

EWI(m)/FWP(i)/T Pc-4 RM

4B/0186/KA/006/006/0102/0713

AUTHOR: Kharitonov, Yu. Ya.; Alikhanova, Z. M.

Abstract: Spectra of some complex compounds of uranyl with hydroxy acid radicals

SOURCE: Radiokhimiya, v. 6, no. 6, 1964, 702-713

ABSTRACT: organouranium compound, IR spectrum, hydroxy carboxylic acid, IR spectroscopy

Abstract: The infrared absorption spectra ( $\sim 650-4000 \text{ cm}^{-1}$ ) of polycrystalline samples of uranyl compounds with residues of malic, tartaric, and trihydroxyglutaric acids, as well as the spectra of the acids themselves, are presented. The structure of the complexes and their deuterated analogs are discussed. On the basis of the data obtained, it was concluded that the uranyl ion in the complexes forms a coordination bond with the nondissociated hydroxy group forms a coordination bond with the hydroxyl group. In the analogous complex with the tartaric acid radical, the uranyl ion forms a regular tetrahedron. In the complex with the trihydroxyglutaric acid, the uranyl ion forms a regular tetrahedron.

Card 1/2

SECRET

ACCESSION NR: AP5017999

It is likely that none of the three nondissociated hydroxyl groups  
 are coordinated with uranium atoms. The complex is  
 a uranyl complex with the compositions  $(UO_2)_2C_{24}H_{40}O_{14}$  and  
 is the same as the compound described in the literature.  
 The formulae of acid radicals are given in the table.  
 This art. has 4 figures, 3 formulae and 2 tables.

CLASSIFICATION: none

DATE: 25Nov63

ENCL: 00

SUB CODE: OC, OP

005

OTHER: 005

005

Card 2/2

KHARITONOV, Yu.Ya.; ZAYTSEV, L.M.; BOCHKAREV, G.S.; YEVSTAF'YEVA, O.N.

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1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova AN SSSR.

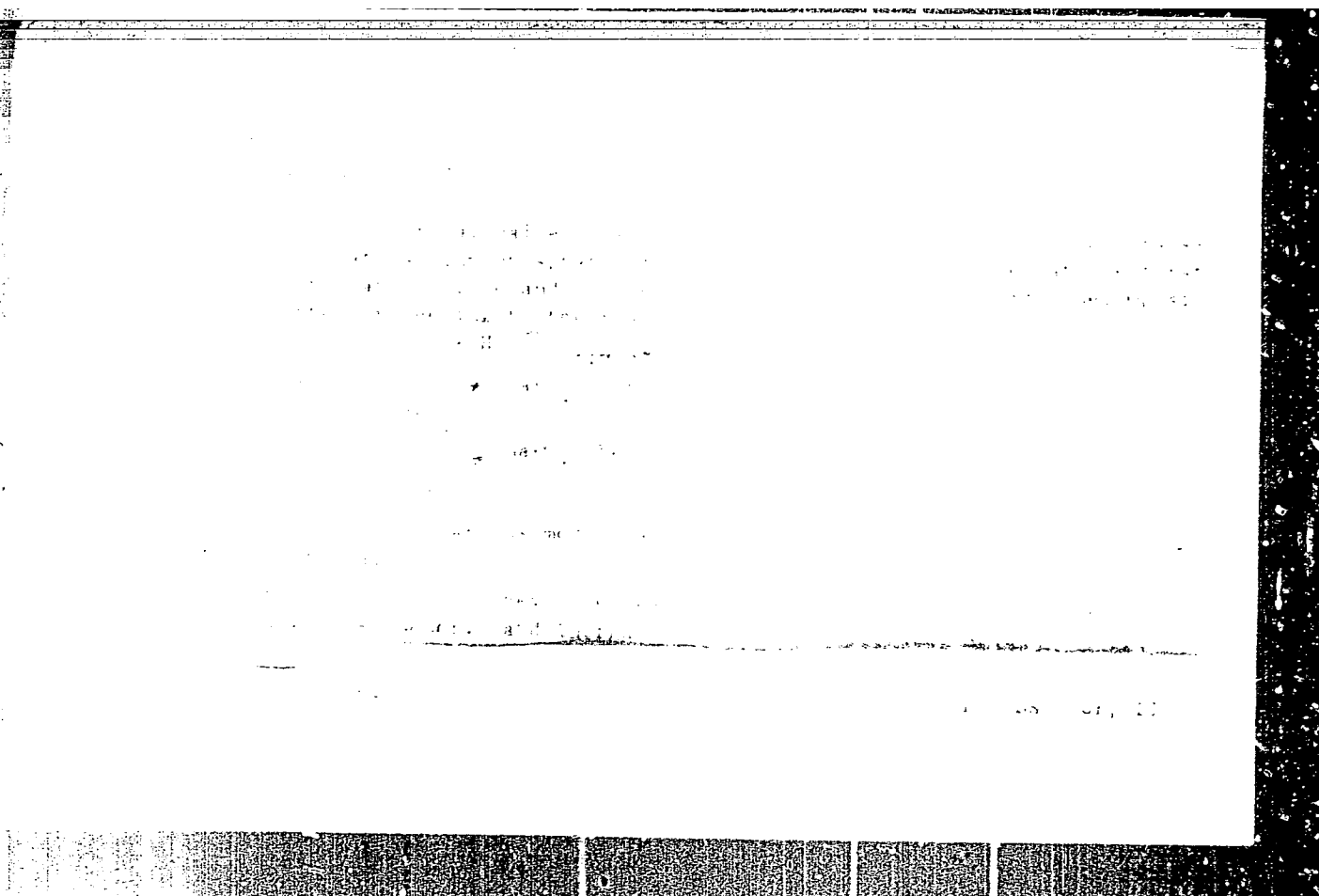
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AN SSSR. Predstavleno akademikom I.I. Chernyayevym.



FIG. 1 (continued) / EEC (continued)



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Dokl. AN SSSR 162 no.4:829-832 Je '65. (MIRA 18:5)

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KHARITONOV, Yu.Ya.; ALIKHANOVA, Z.M.

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Kurnakova i Moskovskiy institut tonkoy khimicheskoy tekhnologii  
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(MIRA 18:6)

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January 21, 1965.

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Infrared absorption spectra of nickel (II) compounds with nitriles.  
Zhur.neorg.khim. 10 no.11:2424-2435 N '65.1

(MIRA 18:12)

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KHARITONOVA, A., ipzh.

Brigade of veterans. Izobr.i rats. no.11:22 N '62. (MIRA 15:12)

1. Khar'kovskiy oblastnoy sovet Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov.  
(Technological innovations)

KHARITONOVA, A.A., master

Some remarks concerning the installation of busbars and connection  
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an electric substation. Energetik 10 no.1:22 Ja '62.  
(MIRA 14.12)  
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AVERIN, Yuriy Viktorovich, doktor biol. nauk; LOZAN, Mina Nikolayevich;  
ROZINSKIY, Shmil' Abramovich; KHARITONOVA, A.A., red.;  
PLENTSKOVSKIY, V.L., tekhn. red.

[Harmful rodents in Moldavia and measures for their control]  
Vrednye gryzuny Moldavii i меры bor'by s nimi. Pod red. I.U.V.  
Averina. Kishinev, Izd-vo "Shtiintsa," 1962. 66 p.  
(MIRA 15:10)

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1. The following information was obtained from a review of the file of the subject, [redacted], [redacted], [redacted];

[redacted]

[redacted]

The following information was obtained from a review of the file of the subject, [redacted], [redacted], [redacted];

[redacted]

(S) (U) (C) (S)

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[redacted]

[redacted]

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Rational method for determining saccharolytic properties of bacteria.  
Lab. delo 7 no.6:30-32 Je '61. (MIRA 14:7)

1. Karagandinskaya oblastnaya sanitarno-epidemiologicheskaya  
stantsiya (glavnyy vrach B.F.Sidorenko).  
(BACTERIA)

~~KHARITONOV~~ (Moskva)

Propagation of elastic-plastic waves in conic rods. Inzh.sbor.  
24:217-221 '56. (MLRA 10:5)  
(Elastic waves) (Elastic rods and wires)

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Fur

By method for cutting fur pelts. Leg. proc. L. no. 7, 1952

9. Monthly List of Russian Accessions, Library of Congress, November 1952, 2 Uncl.

USSR / Human and Animal Morphology, Normal and Pathological.  
Pathological Anatomy.

S

Abs Jour : Ref Zhur Biol., No 8, 1958, No 36045

Author : Kharitonova, A. M.

Inst : ~~Not given~~ on Lett Page . . .

Title : A Comparative Study of Morphological Changes in White Mice  
Under the Influence of Tetracycline.

Orig Pub : Antibiotiki, 1956, 1, No. 3, 33-38.

Abstract : Biomycin, terramycin, and a starch solution of tetracycline were injected into white mice per os at different times: the 1st animal group received 14 mg daily in the course of 25, 35 and 60 days; the 2nd group, 1.4 mg daily in the course of 24 and 35 days; and the 3rd group, the starch solution daily. After the antibiotics' injections, fatty generation of the liver made its appearance, particularly when biomycin was used. The interdependence of the

Card 1/2



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Morphological changes in the organisms of experimental animals following the administration of antibiotics of tetracycline group by various methods [with summary in English]. Antibiotiki 2 no.4: 46-52 J1-Ag '57. (MIRA 10:11)

1. Otdel eksperimental'noy khimioterapii (zav. - chlen-korrespondent AMN SSSR prof. Kh.Kh.Planel'yes) Instituta farmakologii i khimioterapii AMN SSSR.

(TETRACYCLINE, administration,  
morphol. reactions to various modes of admin. in  
animals (Rus))

KHARITONOVA, A.M., Cand Med Sci--(diss) "On the toxic effect of antibiotics of the tetracyclin group on the organism of animals and humans. (Experimental and morphological study)." Leningrad, 1958. 17 pp (Inst of Epidemiology and Microbiology in Acad Med Sci USSR), 200 copies (IL, 44-58, 126)

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USSR/Pharmacology, Toxicology, and Microbiology, Preprint 1958, No 1, 49-52. APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721820007

Abs Jour : Ref Zhur - Biol., No 5, 1958, No 23429

Author : Kivman G.Ia., Kharitonova A.M.

Inst : Not Given

Title : Fatty Dystrophy of the Liver of White Mice Caused by the Oral and Intravenous Administration of Tetracyclins.

Orig Pub : Antibiotics, 1957, 2, No 1, 49-52

Abstract : Chlorotetracyclin (I), tetracyclin (II) and oxytetracyclin (III) were administered orally to mice in daily doses of 1.4 or 14 mg in a starch base and intravenously in daily 0.5 or 1.4 mg doses for 3, 5, 9 and 11 days. It was found, that only the repeated oral administration of I in a 1.4 mg dose induced fatty dystrophy of the liver; in a 14 mg dose I induced the most intensive fatty dystrophy, II induced small changes, and III very insignificant changes. The intravenous administration of tetracyclines in 1.4 and 0.5 mg doses led to the accumulation of fat in the liver in all cases. In the development of fatty dystrophy of the liver the duration of the tetracycline administration was less significant, than the dose and the method of administration.

Card : 1/1

Dept. Chemotherapy, Inst Pharmacology, Chemotherapy AMS USSR

USSR / Pharmacology, Toxicology. Histamine and  
Antihistamines.

V

Abs Jour: Ref Zhur-Biol., No 18, 1958, 85183.

Author : Popenenkova, Z. A., Kharitonova, A. M.

\* Inst : ~~Not given.~~

Title : The Influence of Dimedrol on Biochemical and Histo-  
chemical Changes in the Adrenals of Rabbits Infec-  
ted with Pneumococci.

Orig Pub: Farmakol. i toksikologiya, 1958, Vol 21, No 1, 57-  
64.

Abstract: In pneumococcus infection in rabbits, there is a  
considerable reduction in the amount of ascorbic  
acid first in the cortical, and later also in the  
medullary, layer of the adrenals (A), as well as  
a reduction of adrenalin in them, which the authors  
attribute to increased stimulation of the A by

Card 1/2

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42

Card 2/2

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ANTONOV, B.N., red.; GABERLAND, M.I., tekhn. red.

[Side effects in the use of antibiotics for bacterial infections] Pobochnye iavleniia pri antibiotikoterapii bakterial'nykh infektsii. Moskva, Medgiz, 1960. 358 p. (MIRA 15:1)  
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STRUKOV, A.I.; KHARITONOVA, A.M.

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KHARITONOVA, A.M.; GRACHEVA, N.P.

Experimental study of the ~~new antitumor~~ antibiotic aurentin. Vest.  
AMN SSSR 17 no.3:13-23 '62. (MIRA 15:4)

1. Institut epidemiologii i mikrobiologii imeni N.F.Gamalei AMN SSSR.  
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GRACHEVA, N.P.; AKOP'YANTS, S.S.; KHARITONOVA, A.M.

Effectiveness of peroral administration of aurantin in the  
treatment of Ehrlich's carcinoma. Antibiotiki 8 no.2:154-158  
F'63. (MIRA 16:7)

1. Otdel infektsionnoy patologii i eksperimental'noy terapii  
infektsiy (zav. - chlen-korrespondent AMN SSSR prof. Kh.Kh.  
Planel'yes ) Instituta epidemiologii i mikrobiologii imeni  
N.F.Gamalei AMN SSSR i otdeleniye khimioterapii onkologicheskoy  
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(CANCER) (AURANTIN)

KHARITONOVA, A.M.

Effect of aurantin on the endocrine system. Antibiotiki 8 no.2:  
119-126 F'63. (MIRA 16:7)

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infektsiy (zav. - chlen-korrespondent AMN SSSR Kh.Kh.Planel'yes)  
Instituta epidemiologii i mikrobiologii imeni N.F.Gamalei AMN  
SSSR.

(AURANTIN) (ENDOCRINOLOGY)



GRACHEVA, N.P.; KHARITONOVA, A.M.

Effect of aurantin on Brown-Pearce carcinoma in rabbits. Anti-  
biotiki 8 no.3:268-273 Mr'63 (MIRA 17:4)

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Planel'yes) Instituta epidemiologii i mikrobiologii imeni N.F.  
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Dept of Infectious Pathology & Experimental Therapy, Inst of Epidemiology & Microbiology, AMS USSR.

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[Side effects in the antibiotic therapy of bacterial infections] Pobochnye iavleniia pri antibiotikoterapii bakterial'nykh infektsii. Izd.2., perer. i dop. Moskva, Meditsina, 1965. 429 p. (MIRA 18:6)

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